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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/701,305	11/04/2003	Katsufumi Ohmuro	1508-68672	5050
7590	08/23/2006		EXAMINER	
Patrick G. Burns, Esq. GREER, BURNS & CRAIN, LTD. Suite 2500 300 South Wacker Dr. Chicago, IL 60606			SAID, MANSOUR M	
			ART UNIT	PAPER NUMBER
			2629	
			DATE MAILED: 08/23/2006	

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/701,305	OHMURO ET AL.
	Examiner MANSOUR M. SAID	Art Unit 2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 04 August 2006.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-4 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-4 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### *Drawings*

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the “a resin film” must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamanaka et al. (6,452,653 B1).**

**As to claim 1,** Yamanaka teaches a liquid crystal display device (figures 1, 4 & 8 and column 1, lines 5-14) constituted by enclosing liquid crystal (figure 8, (21)) between a pair of substrates (figure 8, (20 & 11)) and column 23, lines 1-26), comprising: on one of the pair of substrates (substrate, (figure 8, (11))), gate bus lines supplied with scanning signals (it is extremely well known in the art, and it is inherent to have such feature in the LCD panel and see (column 32, lines 38-50)); data bus lines supplied with display signals (it is extremely well known in the art, and it is inherent to have such feature, in the LCD panel and see (column 32, lines 38-50)); thin-film transistors having gate electrodes electrically connected to the gate bus lines and drain electrodes electrically connected to the data bus lines (it is extremely well known in the art, and it is inherent to have such feature in the LCD panel, column 28, lines 51-67, column 29, lines 1-5, and column 32, lines 38-50); a resin film (resin layer, (figure 1, (14)) divided for each picture element (reflector, (figures 1 & 8, (15)) has a liquid crystal layer), (column 18, lines 29-35, column 20, lines 6-55) and having wrinkle-form surface ruggedness (figures 1 & 8 and (column 18, lines 29-35, column 20, lines 6-55); and reflection electrodes

(figures 1 & 8, (15)) formed on the resin film (resin layer, (figure 1, (14)), having ruggedness following the ruggedness of the resin film (figures 1 & 8 and (column 18, lines 29-35, column 20, lines 6-55); and electrically connected to source electrodes of the thin-film transistors (figures 1-8, column 28, lines 51-67, column 29, lines 1-5, and column 32, lines 38-50).

**As to claim 2,** Yamanaka teaches wherein the resin film (resin layer, (figure 1, (14)) is partially divided for each picture element (reflector, (figures 1 & 8, (15)) has a liquid crystal layer), (column 18, lines 29-35, column 20, lines 6-55).

**As to claim 3,** Yamanaka teaches wherein the resin film (resin layer, (figure 1, (14)) and the reflection electrode (reflector, (figures 1 & 8, (15)) are divided into a plurality of regions by a slit (figures 1 & 8 and (column 18, lines 29-35, column 20, lines 6-55).

#### *Claim Rejections - 35 USC § 103*

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamanaka in view of Miyawaki et al. (5,708,486).**

Yamanaka teaches an LCD comprises a reflector having a substrate a resin layer, a light reflecting thin film and a light transmission regions, but he does not expressly show that a gate lines, a data lines and a thin-film transistors are disposed below a reflection electrodes.

However, Miyawaki teaches wherein the gate bus lines, the data bus lines, and the thin-film transistors are disposed below the reflection electrodes (figure 1B and column 4, line 61 through column 5, line 29).

Therefore, it would have been to one ordinary skill in the art at the time the invention was made to incorporate Miyawaki's teaching having gate lines, data lines and the TFT below the reflection electrode into Yamanaka's LCD device so as to remove a reflection light component irrelative to display signals, which becomes noises, and to perform high contrast display so as to practice a reflection type of display unit (column 1, lines 40-45).

### ***Conclusion***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nakamura et al. (5,847,789) teaches a reflective type liquid crystal display device.

Kanaya et al. (6,169,593 B1) teaches a reflection type liquid crystal display device includes the steps of forming an ITO layer in the first substrate.

Ikeno et al. (2004/0218120 A1) teaches a reflection electrode has an undulated shape and whose normal direction is distributed unevenly.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mansour M. Said whose telephone number is 571-272-7679. The examiner can normally be reached on Monday through Thursday from 8:30-6:00 P.M. The examiner can also be reached on alternate Friday from 8:30 a.m. to 5:00 p.m. EST. If attempts to

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reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe whose telephone number is 571-272-7681.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to: 571-273-8300 (for Technology Center 2600 only)

Hand-delivered responses should be brought to the Customer Service Window at the Randolph Building, 401, Dulany Street, Alexandria, VA 22314.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mansour M. Said

8/16/06



RICHARD HJERPE  
SUPERVISORY PATENT EXAMINER  
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